

PATENT APPLICATION

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re the Application of      Teruo SISHISHITA  
Group Art Unit                :      (Unassigned)  
Application No.                :      (Natl. Phase of PCT/IB04/02385)  
Examiner                        :      (Unassigned)  
Filed                             :      (Herewith)  
Docket No.                     :      10517/312  
For                                :      **BATTERY PACK CAPACITY CONTROL SYSTEM**

**INFORMATION DISCLOSURE STATEMENT**

COMMISSIONER FOR PATENTS  
Customer Service Window  
Randolph Bldg.  
401 Dulany Street  
Alexandria, VA 22314

Sir:

Pursuant to 37 CFR § 1.56, the attention of the Patent and Trademark Office is hereby directed to the reference(s) listed on the attached PTO-1449. Unless otherwise indicated herein, one copy of each reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom. The filing of this Information Disclosure Statement and the enclosed PTO Form No. 1449, shall not be construed as an admission that the information cited is prior art, or is considered to be material to patentability as defined in 37 C.F.R. § 1.56(b). The paragraphs marked below are applicable. It is believed that no fees other than those indicated below are due, but authorization is hereby given to charge any additional fees due, or to credit any overpayment, to deposit account 11-0600.

☒ 1. This Information Disclosure Statement is being filed (a) within three months of the filing date of a national application other than a continued prosecution application under 37 C.F.R. § 1.53(d), (b) within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, (c) before the mailing date of a first Office Action on the merits in the present application, OR (d) before the mailing of a first office action after filing of a request for continued examination. No certification or fee is required.

☐ 2. This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a final action, Notice of Allowance, or any action that otherwise closes prosecution.

- ☐ a. I hereby certify that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 CFR §1.97(e)(1).
- ☐ b. I hereby certify that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 CFR §1.97(e)(2).
- ☐ c. Please debit Deposit Account No. 11-0600 in the amount of \$180.00 in payment of the fee under 37 CFR §1.17(p) to ensure consideration of the disclosed information. Two duplicate copies of this paper are attached. 37 CFR §1.97(c)(2).
- ☐ 3. This Information Disclosure Statement is being filed after the mailing date of a final action, Notice of Allowance or an action that otherwise closes prosecution, but before payment of the Issue Fee. Applicant(s) hereby request(s) that the Information Disclosure Statement be considered. Please debit Deposit Account No. 11-0600 in the amount of \$180.00 in payment of the petition fee under 37 CFR §1.17(p) to ensure consideration of the disclosed information. Two duplicate copies of this paper are attached.
- ☐ a. I hereby certify that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in any counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 CFR §1.97(e)(1).
- ☐ b. I hereby certify that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 CFR §1.97(e)(2).
- ☐ 4. Relevance of the non-English language reference(s) is discussed in the present specification.
- ☐ 5. The reference(s) was/were cited in a counterpart foreign application. An English language version of the foreign search report is attached for the Examiner's information.
- ☒ 6. A concise explanation of the relevance of certain non-English language reference(s) appears in the Appendix attached hereto.
- ☐ 7. The Examiner's attention is directed to co-pending U.S. Patent Application No. \_\_\_\_\_, filed, which is directed to related technical subject matter. The identification of this U.S. Patent Application is not to be construed as a waiver of secrecy as to that application now or upon issuance of the present

application as a patent. The Examiner is respectfully requested to consider the cited application and the art cited therein during examination of the present application.

☐ 8. This application is one of a series of related applications, identified in the attached Appendix, which are directed to related technical subject matter. The identification of those U.S. Patent Applications is not to be construed as a waiver of secrecy as to those applications now or upon issuance of the present application as a patent. The Examiner is respectfully requested to consider the cited applications and the art cited therein during the examination.

☐ 9. The reference(s) was/were cited by or submitted to the Office in parent application No. \_\_\_\_\_, filed \_\_\_\_\_, which is relied upon for an earlier filing date under 35 U.S.C. §120. Thus, copies of these references are not attached. 37 CFR §1.98(d).

☒ 10. English-language Abstracts of the non-English language references are attached hereto.

☒ 11. Copies of U.S. references are not required.

☒ 12. Other: JP 2000-014029A is equivalent to USP 6,133,707A which has been assigned to the assignee of the present application and is therefore related thereto. A copy of the International Search Report is enclosed.

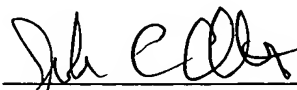
#### Statement of Related Application/Patent

The following application and patent assigned to the assignee of the present application are related thereto: Copies of the related patent and application are submitted herewith.

US Patent No.:	6,133,707
Inventors :	KIKUCHI, et al.
Issued :	17 October 2002
 Patent No	 6,828,758 B2
Inventor :	ISHISHITA
Issued :	07 December 2004

Respectfully submitted,

Date: 05 January 2006

  
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## List of Documents for IDS

Our Ref. No.

TFN040027-US

Client No.

TSN2004-0107-US-00

US Patent	File Date	Publication Date Or Issue Date	Comments
JP (A) 11-174135	Dec. 09, 1997	Jul 2, 1999	In a device for measuring remaining capacity of battery, a remaining capacity of batteries for each battery is calculated based on a specific number of voltages and current being collected and selected the remaining capacity with the minimum value out of the remaining capacity of each battery being calculated. Thus, the remaining capacity of all a plurality of batteries is calculated based on the selected remaining capacity.
US 6,133,707 (A) (corresponding to JP (A) 2000-014029)	May 20, 1999 (Jun. 25, 1998)	Oct. 17, 2000 (Jan 14, 2000)	A voltage detector detects the voltage levels of battery blocks of a battery set. A presence of an over-discharged cell is detected when a voltage difference between each of the battery blocks reaches or exceeds a predetermined value. At this point, a battery ECU sets the SOC (i.e. state of charge) value of the battery set at the lower control limit value. This triggers an HV ECU to control the load such that charging is effectuated in the battery set. If further discharge occurs, the battery set is disconnected from the load by a relay. This method has a problem of complicated computation for the SOC control since the SOC

			is controlled with reference to the lower and upper limit values of the control range.
JP (A) 2003-244860	Feb. 20, 2002	Aug. 29, 2003	The remaining capacity in each battery cell within a battery set or in each battery block, where a plurality of battery cells are connected in series is obtained, and the representative SOC (i.e. state of charge) in the battery set is calculated from the minimum capacity value out of the dispersion of this remaining capacity. The charging and discharging control of the battery set is performed so that this representative SOC lies in a specified control range. Then, the SOC can be controlled by a simple processing and the dispersion of the SOC can be suppressed.

We would like you to furthermore file a ***"List of Related Cases"*** as follows:

Application Serial No.

***USP 6,133,707***

(Oliff & Berridge, PLC)

Client Reference No.

TSN 1998-0438-US-00

Date of filing

May 20, 1999

US Patent application No.

***10/361,917***

(Kenyon & Kenyon)

Client Reference No.

TSN2002-0287

Date of filing

Feb. 11, 2003

Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known

Application Number (Natl. Phase of PCT/IB04/02385)  
Filing Date (Herewith)  
First Named Inventor Teruo ISHISHITA  
Art Unit (Unassigned)  
Examiner Name (Unassigned)  
Attorney Docket Number 10517/312

## U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
	1	US-6,359,419 B1	03/19/02	VERBRUGGE et al.	
	2	US-6,133,707 A	10/17/02	KIKUCHI et al.	
	3	US-6,828,758 B2	12/07/04	ISHISHITA	
		US-			
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## FOREIGN PATENT DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
	1	JP 11-174135A	07/02/99	YAZAKI CORP		
	2	JP 2000-014029A	01/14/00	TOYOTA MOTOR CORP	= 6,133,707 A	
	3	JP 2003-244860A	08/29/03	TOYOTA MOTOR CORP		
	4	EP 0 909 001 A2	04/14/99	TOYOTA JIDOSHA KK		
	5	EP 0 909 001 A3	04/05/00	TOYOTA JIDOSHA KK et al.		
	6	EP 0 967 108 A	12/29/99	TOYOTA JIDOSHA KK		

Examiner Signature

Date Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. #496699